Pokhara University

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| Level: Bachelor | Semester: Spring | Year : 2014 |
| Programme: BE | | Full Marks: 100 |
| Course Engineering Economics | | Pass Marks: 45 |
| Time : 3hrs. |

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| *Candidates are required to give their answers in their own words as far as practicable.* |
| *The figures in the margin indicate full marks.* |
| Attempt all the questions. |

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|  | 1. Define Engineering Economics. Explain its Principles. 2. What is mean by elasticity of demand? Describe all types price elasticity of demand with suitable figures. | 8  7 |
|  | a) Find the value of G if i=12% **(8)**  4G  5,000  0 1 2 3 4 5  50,000  b) Describe manufacturing cost and non manufacturing cost with examples. | 7  8 |
|  | 1. Evaluate IRR of the following project, Identify whether the projects id feasible or not? Also draw investment Balance Diagram   Initial investment Rs.10,00,000  Annual Revenues Rs.240000  Annual cost Rs.60000  Useful life year 10 years  MARR 10%   1. A new machine costing Rs.250000 is estimated to have life of 10 years and expected annual revenue is 5000 with annual Rs.12500.Defermine the investment decision based o pw formulation top this machine, if salvage value is Rs. 7000 and MARR is 10% per year. Make also cash flow diagram. | 8  7 |
|  | 1. a) Find both types of B/C ratio (Conventional and Modified) using AW formulation of the following projects and find weather the project is feasible or not  |  |  | | --- | --- | | Initial investment | Rs.5,00,000 | | Annual Revenue | Rs.80,000 | | Annual O&M Cost | Rs.15,000 | | Salvage value | Rs.10,000 | | Life | 20 yrs. | | MARR | 10% |   b) Make a selection from the following two mutually exclusive alternatives.   |  |  |  | | --- | --- | --- | | Alternative | A | B | | Capital Investment (Rs) | 450000 | 600000 | | Annual Revenue(Rs) | 22000 | 26000 | | Annual Expenses(Rs) | 7450 | 11020 | | Useful Life (yr.) | 6 | 8 | | Market Value(Rs) | 25000 | 28000 | | MARR | 10% | 10% |  1. Make repeatability assumption method | 7  8 |
|  | a) Consider following accounting information for a computer system.  Cost basis of the asset=Rs.40, 000  Useful life=5 yrs  Estimated salvage value= Rs.2, 500  Compute the annual depreciation and resulting book value using double declining balance method**.**  b) Calculate the cost of debt if a firm has a debt of Rs 200000 in bonds at a 10% average cost. The proceeds for offering was Rs 180000.The offering has a 5 year maturity period. | 7  8 |
|  | 1. Write the fundamental equation of accounting. Explain General accounting and cost accounting. 2. What do you mean by t? Explain the term Personal tax and corporate tax | 8  7 |
|  | Write short notes on: (Any two)   1. Type of depreciation   b) Public Private Partnership  c) Value added tax (VAT) | 2×5  5  5  5 |